Of seventeen species quoted by Grote as identical with European species, Dr. Speyer has not yet seen specimens.

Of course the detailed exposition for each species can not be given in a short report.

[Much to our regret, since we desire to have no anonymous articles in PSYCHE, the author of the above report declined to allow his name to be appended to it. *Ed.*]

Varieties of Cleora pulchraria Minot.

This beautiful species stands entirely alone in our fauna, as it is our only representative of a remarkable European genus, of which the most prominent structural characters are the strongly pectinate antennæ of the male and the extruded ovipositor of the female. In this part of Massachusetts the insect appears to be quite rare, and local in its distribution ; this is probably due to the fact that the larvæ feed on pine ; but I have been able to obtain, in September and October, resting on the trunks of a grove of these trees, behind the Museum of Comparative Zoology at Cambridge, nearly two hundred specimens of the moths. One must naturally expect, in the collocation of so many specimens, to see a certain number of aberrant forms, but I was by no means prepared to find the extraordinary amount of variation actually exhibited. I give a short description of the general plan of the simple ornamentation of the species, in order that the variations from it may be more readily appreciated. The anterior wings are crossed by two distinct black lines, the interior lobate, the exterior sharply dentate between the nervules ; between them the discal dot is always seen, very black and conspicuous; the posterior wings have the discal dot, and following it a single median dentate line. The features most liable to vary are as follows, the most inconstant being placed first: the ground color, the structure and proximity of the median lines, the color of the vertex and front, and the shape of the wings. Before mentioning each individual variety, I would remark that no class of variations is confined to either sex; both sexes appear to vary within the same limits and to the same extent.

The ground color, which shows the greatest diversity, in the normal form is white, more or less thickly sprinkled with black

atoms; the base of the posterior wings is always more free from them than are the other parts of the wings. In one form the black atoms are so small and few in number that the insects look entirely white; at the other extreme specimens occur, in which they are so numerous that the color appears black, covered with thinly scattered white specks; in still others the black atoms lose their identity and the ground color becomes uniform gray or blackish gray; but in a large series these extreme forms are connected by so many intermediate links, that shade gradually into each other, that it is impossible to draw anywhere the line which separates them from each other. In one curious variety the black atoms are massed together into small blotches; the nervules are black and contrasting and appear like a network connecting the median lines. Individuals having the usual ground color, but in which one or more of the nervules are accompanied by a black band, are not infrequent. In one remarkable male the ground is uniform blackish gray, and even the fringe is gray and not chequered as usual; the ordinary lines are indistinct and diffuse, and each accompanied by a distinct white line which makes the specimen very conspicuous; in another, a female, the ground is the same, but the white lines are absent.

After the ground color, the median lines show the most variation. Ordinarily they are situated at a nearly equal distance from one another and from the base and external margin; sometimes they are connected by a fine submedian dash; in one strongly marked specimen they actually touch each other; on the other hand, in two females, they are so widely separated that the median space occupies fully three-fourths of the surface of the anterior wings. The exterior line is always sharply dentate outwardly; in some specimens it is narrow and clearly defined inwardly, in others it is very thick and heavy, and in some individuals of the latter form it is strongly suffused. The interior line is always thicker than the outer line, but it usually has its lobes distinct; occasionally, however, it is so much suffused that the form of the lobes is lost; in one pale specimen this line, as well as the exterior, is thin, and both are nearly obsolete.

The color of the vertex is usually white or gray, but it is sometimes ochreous, and in one specimen it is even orange; the front almost always varies in the same manner, but in a less degree.

No two specimens have their wings of exactly the same shape, but in general the variation is only slight; in some females, however, the elongation of both pairs is quite perceptible, and in such specimens the costa is more strongly arched than usual, and on the posterior wings the costal angle is less, and the anal angle greater; in one well marked insect of this group the posterior wings are shorter and more triangular than in others.

I have described the principal types of variation, and have given a few examples under each; it would be quite impossible to characterize them all within the limits of this paper. I know of no Geometrid in which there is so much variability in characters which are usually in this family constant and of specific value. *H. K. Morrison.*

BIBLIOGRAPHICAL RECORD.

Authors and Societies are requested to forward their works to the Editor at the earliest date possible. We ask our readers to inform us of the publication especially of those works which are not generally consulted by entomologists. *B. Pickman Mann.*

(*Continued from page* 64.)

[*Measures of defence against insects not being a part of the science of entomology, although of small value in its absence, they will only be noticed hereafter, in this Record, when given in connection with some matter of entomological import.*

In addition to articles on Insects, we shall hereafter record articles on all other Arthropoda, except Crustacea.]

* 173. The **Proc. Bost. Soc. Nat. Hist.** [see Rec., Nos. 1–10], vol. xvi, from p. 209, contain the following, and Nos. 174–177.

a. On the disposition made of some of Abbot's paintings of insects (by S. H. Scudder), p. 295 (see also, vol. xvii, p. 10–11). *b.* On the capture of *Argynnis polaris* by the Polar Expedition (by S. H. Scudder), p. 365.

* 174. A. R. Grote. Descriptions and Notes on the Noctuidæ. p. 239–245.

Enumerates 15 species; describes 10 (9 ? new) species.